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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,244	10/05/2000	William L. Robertson	5181-35900	1166

7590 08/10/2004

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Austin, TX 78767

EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/680,244	Applicant(s) ROBERTSON, WILLIAM L.	
	Examiner Kim T. Huynh	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-16, 25, 26-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodrum (US Patent 5,922,060) in view of Heinrich et al. (US Patent 6,542,995), and further in view of Craig et al. (US Patent 6,573,620)

As per claims 1, 26, Goodrum discloses a computer system comprising:

- a central processing unit (CPU) (fig.1,12);
- a peripheral bus (fig.1, 32);
- a bus interface unit (fig.1,18) coupled to accommodate communications between said CPU and said peripheral bus; (fig.1, wherein, bridge (18) communicated between cpu(12) and PCI bus (22))
- a first daughtercard configured to assert a first configuration change signal in response to said first daughtercard being inserted within a first connector associated with said peripheral bus; (col.1, lines 18-29, 49-56)
- a second daughtercard configured to assert a second configuration change signal in response to said second

daughtercard being inserted within a second connector associated with said peripheral bus; and (col.1, lines 18-29, 49-56)

Goodrum discloses all the limitations as above except the bus interface unit includes a storage unit including a first storage location for storing a state of said first configuration change signal and a second storage location for storing a state of said second configuration change signal, and wherein the first storage location is coupled to receive the first configuration change signal via a first signal line and the second storage location is coupled to receive the second configuration change signal over a second signal line.

However, Heinrich discloses the configuration control unit is coupled to the peripheral bus and receives a configuration command, or wake command, transmitted across the peripheral bus. The configuration command will cause all peripheral devices that have an identifying number which matches the subsequent write data to transition from a sleep state to possibly a configuration state. Configuration registers associated with corresponding peripheral devices can be configured with an I/O address and assigned to respective peripheral devices. (col.2, line 60-col.3, line 26). Furthermore, Heinrich discloses a security control unit is linked to a peripheral bus on which a secured group of the plurality of peripheral devices are coupled. The security control unit is adapted

to detect a change in I/O addresses associated with the secured group of peripheral devices and to prevent accesses to the secured group of peripheral devices before and after the I/O addresses associated therewith are changed. A change in the I/O address can then be detected, and the changed I/O address can be stored. The changed I/O address may be recalled whenever access to the peripheral device is attempted. (col.3, line 60-col.4, line 12)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Heinrich's teaching into Goodrum's system so as to have the flexibility of re-assigning security controls within an existing plug and play stem would present a beneficial advancement over conventional, non-flexible(or fixed) security assignments. (col.2, lines 26-30)

Furthermore, Goodrum fails to disclose receiving the configuration change signal over a second signal line that is separate from the first signal line. However, Craig discloses a bus bridge having a configuration input terminal and an output terminal, the bus bridge generating a first and second initialization signal on the output terminal in response to receiving a first and second configuration signal on said configuration input terminal, respectively. (col.4, lines 46-56) Bus bridge 18 providing inputs, outputs are electrically coupled together by a plurality of conductive traces(lines) 16.(col.3, lines 1-9)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Craig's teaching into Goodrum's system so as to reduce the effect of damage the personal computer while upgrading. (col.1, lines 38-48)

As per claims 2, 27, Goodrum discloses first configuration change signal has a first state and a second state. (col.8, lines 52-62)

As per claim 3, 28, Goodrum discloses first state is a logic-low voltage. (col.8, lines 52-62)

As per claims 4, 29, Goodrum discloses first state indicates that said first daughtercard has been recently inserted into said first connector. (col.1, lines 58-65)

As per claims 5, 30, Goodrum discloses first state indicates that said first daughtercard is to be extracted from said first connector. (col.2, lines 7-15)

As per claims 6, 31, Goodrum discloses a state of said first configuration change signal is read from said storage unit on a periodic basis. (col.4, lines 9-24), wherein monitoring implies periodic)

As per claims 7, 32, Goodrum discloses peripheral bus is a PCI bus. (fig.2, 22, 32)

As per claims 8, 33, Goodrum discloses computer system is configured to drive a sense signal to said first daughtercard upon insertion of said first daughtercard into said first connector. (col.1, lines 58-65)

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As per claims 9, 34, Goodrum discloses computer system is configured to receive a presence detect signal upon insertion of said first daughtercard into said first connector. (col.1, lines 58-65)

As per claims 10, 35, Goodrum discloses computer system is configured to drive a reset signal to said first daughtercard in response to receiving said presence detect signal. (col.2, lines 39-45)

As per claims 11, 36, Goodrum discloses first daughtercard includes power control circuitry, wherein said power control circuitry is configured to perform a power-up sequence on said first daughtercard in response to receiving said sense signal from said computer system. (col.5, lines 41-45)

As per claims 12, 37, Goodrum discloses first daughtercard is configured to drive a board ok signal to said computer system following completion of said power-up sequence. (col.5, lines 41-45)

As per claims 13, 38, Goodrum discloses computer system is configured to de-assert said reset signal in response to receiving said board ok signal from said first daughtercard. (col.2, lines 51-61)

As per claims 14, 39, Goodrum discloses first daughtercard is configured to assert said first configuration signal in response to said computer system de-asserting said reset signal. (col.2, lines 51-61)

As per claims 15, 40, Goodrum discloses computer system is configured to establish software communications between said computer systems

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and said first daughtercard in response to a detection of said first configuration change signal. (col.1, lines 58-65)

As per claims 16, 41, Goodrum discloses first configuration change signal is deasserted upon establishing software communication between said computer system and said first daughtercard. (col.2, lines 51-61)

As per claim 25, Goodrum discloses first daughtercard and said second daughtercard are configured for hot swapping. (col.3, 62-65)

3. Claims 17-22, 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodrum (US Patent 5,922,060) in view of Heinrich et al. (US Patent 6,542,995) and further in view of Craig et al. (US Patent 6,573,620) and further in view of Harari et al. (US Patent 6,381,662)
As per claims 17-19, 42, Goodrum discloses all the limitations as above except one ejector handle which includes switch configured to be actuated by switch and first configuration change signal is asserted in response to an actuation of switch. However, Harari discloses the daughter card is secured in place by a latch mechanism and is removable by ejector.
(col.10, lines 22-33)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Harari's teaching into Goodrum's method to have ejector mechanism so as to be easy to operated under predetermined system operational logic. (col.10, lines 22-33)

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As per claims 20, 43, Goodrum discloses computer system is configured to terminate software communications between said computer system and said first daughtercard in response to an assertion of said first configuration change signal. (col.3, lines 35-41), (col.2, lines 58-61)

As per claims 21, 44, Goodrum discloses computer system is configured to de-asser a sense signal upon termination of software communications between said cmputer system and said first daughtercard. (col.3, lines 34-41), (col.2, lines 58-61)

As per claims 22, 45, Goodrum discloses computer system is configured to drive a reset signal to said first daughtercard upon termination of software communications between said computer system and said first daughtercard. (col.3, lines 51-57)

4. Claims 23-24, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodrum (US Patent 5,922,060) in view of Heinrich et al. (US Patent 6,542,995) and further in view of Harari et al. (US Patent 6,381,662) and further in view of Olarig (US Patent 6,047,343)

Goodrum discloses all the limitations as above except daughtercard includes LED which response to upon termination. However, Olarig discloses LED for indication of removable. (col.4, lines 27-40)

It would have been obvious to one having ordinary skills in the art at the time the invention was made to incorporate Olarig's teaching into Goodrum's method to have LED for response to upon termination so as to be easily to recognize if card is on or off the system.

Response to Arguments

5. Applicant's arguments filed on 6/21/04 have been fully considered but are moot in view of the new ground(s) of rejection.

a. In response to applicant's argument that neither nor Sakarda, taken singly or in combination, teach or suggest a bus interface unit coupled to receive a first configuration change signal via a first line and a second configuration change signal via a second signal line. However, Heinrich discloses the configuration control unit is coupled to the peripheral bus and receives a configuration command, or wake command, transmitted across the peripheral bus. The configuration command will cause all peripheral devices that have an identifying number which matches the subsequent write data to transition from a sleep state to possibly a configuration state. Configuration registers associated with corresponding peripheral devices can be configured with an I/O address and assigned to respective peripheral devices. (col.2, line 60-col.3, line 26).

Furthermore, Heinrich discloses a security control unit is linked to a peripheral bus on which a secured group of the plurality of peripheral devices are coupled. The security control unit is adapted to detect a change in I/O addresses associated with the secured group of peripheral devices and to prevent accesses to the secured group of peripheral devices before and after the I/O addresses associated therewith are changed. A change in the I/O address can then be detected, and the changed I/O address can be stored. The changed I/O address may be recalled whenever access to the peripheral device is attempted. (col.3, line 60-col.4, line 12). Furthermore, Goodrum fails to disclose receiving the

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configuration change signal over a second signal line that is separate from the first signal line. However, Craig discloses a bus bridge having a configuration input terminal and an output terminal, the bus bridge generating a first and second initialization signal on the output terminal in re

response to receiving a first and second configuration signal on said configuration input terminal, respectively. (col.4, lines 46-56) Bus bridge 18 providing inputs, outputs are electrically coupled together by a plurality of conductive traces(lines) 16.(col.3, lines 1-9)

Thus, the prior art teaches the invention as claimed and do not distinguish over the prior art as applied.

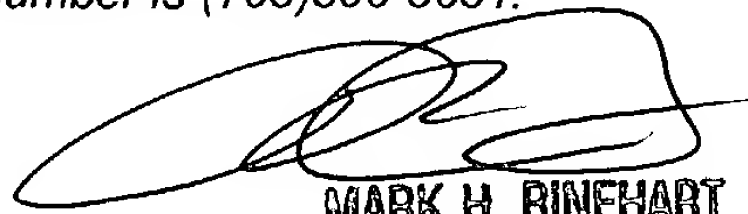
Conclusion

6. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (703)305-5384 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 8:30AM-6:30PM.*

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815 or via e-mail addressed to [mark.rinehart@uspto.gov]. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5631.

Kim Huynh


MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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July 31, 2004